

Amendments to the Claims

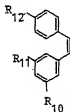
This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Original) A resveratrol derivative having the formula:



selected from the group consisting of compounds wherein:

a)  $R_{10} = R_{11} = -OCH_3$  and  $R_{12} = -O(PO)(OBn)_2$ ; and

b)  $R_{10} = R_{11} = -OCH_3$  and  $R_{12} = -O(PO)(ONa)_2$ .

5. (Cancelled)

AMENDMENT AND RESPONSE TO OFFICE ACTION

Docket No. 12504.528

Title: "Structural Modification of Resveratrol: Sodium Resverastatin Phosphate"

U.S. Serial No. 10/510,675

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

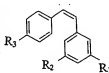
12. (Cancelled)

13. (Cancelled)

14. (Original) A pharmaceutical composition comprising the compound of claim 4, or a pharmaceutically acceptable salt thereof.

15. (Cancelled)
16. (Cancelled)
17. (Cancelled)
18. (Original) A method for treating humans and mammals afflicted with cancer, comprising administering a physiologically effective amount of the compound of claim 4, or a pharmaceutically acceptable salt thereof.
19. (Cancelled)
20. (Cancelled)
21. (Cancelled)
22. (Cancelled)
23. (Cancelled)

24. (New) A method for synthesizing the compound **14g** having the following structure and wherein  $R_1 = -OH$  and  $R_2=R_3 = -OCH_3$ :



comprising the following steps:

- (a) protecting 3,5-dihydroxybenzaldehyde by reacting it in dimethylformamide with DIEA and silyl chloride;
- (b) separating the products of step (a) to obtain 3-(tert-butyldimethylsilyloxy)-5-hydroxybenzaldehyde;
- (c) adding to the 3-(tert-butyldimethylsilyloxy)-5-hydroxybenzaldehyde obtained in step (b) molecular sieves, proton sponge and trimethyloxonium tetrafluoroborate, then stirring, then filtering, then rinsing sieves with solvent, then removing the solvent from filtrate to yield an oil;
- (d) purifying the oil produced in step (c), to yield 3-(tert-butyldimethylsilyloxy)-5-methoxybenzaldehyde;

(e) reacting the 3-(tert-butyl dimethylsilyloxy)-5-methoxybenzaldehyde produced in step (d) with 4-(tert-butyl diphenylsilyloxy)-benzyl triphenyl phosphonium bromide to produce (Z)- and (E)- 3-(tert-butyl dimethylsilyloxy)-5,4'-dimethoxy-stilbene; and

(f) deprotecting, and then separating, the product of step (e), to obtain compound **14g**.

25. (New) A method for synthesizing the compound **14c** having the following structure wherein  $R_4 = R_5 = -OCH_3$  and  $R_6 = -OH$ :



comprising the following steps:

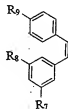
- (a) protecting 4-hydroxybenzaldehyde to obtain a solution of 4-(tert)-butyl dimethylsilyloxy-benzaldehyde;
- (b) adding tert-butyl dimethylsilylchloride to the solution formed in step (a);
- (c) pouring the reaction mixture of step (b) into water, extracting with solvent, and removing solvent in vacuo to recover 4-(tert)-butyl dimethylsilyloxy-benzaldehyde;
- (d) reacting the 4-(tert)-butyl dimethylsilyloxy-benzaldehyde obtained in step (c) with 3,5-dimethoxybenzyl triphenyl phosphonium bromide and n-butyl lithium in tetrahydrofuran to form (Z)- and (E)-4'-(tert-butyl dimethylsilyloxy)-3,5-dimethoxy-stilbene;

(e) separating the (Z) and (E) isomers of the 4'-(tert-butyldimethylsilyloxy)-3,5-dimethoxy-stilbene formed in step (d) to obtain (Z)-4'-(tert-butyldimethylsilyloxy)-3,5-dimethoxy-stilbene;

(f) reacting the (Z)-4'-(tert-butyldimethylsilyloxy)-3,5-dimethoxy-stilbene in anhydrous tetrahydrofuran with tetrabutylammonium fluoride; and

(g) separating the products of step (f) to obtain compound **14c**.

26 (New) A method for synthesizing the compound **14k** having the following structure wherein  $R_7 = -OH$  and  $R_9 = -OCH_3$ :



comprising the following steps:

(a) reacting 4-methoxybenzyltriphenylphosphonium bromide and 3,5-di(tert-butyldimethylsilyloxy)-benzaldehyde to obtain (Z)- and (E)-3,5-di(tert-butyldimethylsilyloxy)-4'-methoxy-stilbene);

(b) deprotecting the (Z)- and (E)-3,5-di(tert-butyldimethylsilyloxy)-4'-methoxy-stilbene obtained in step (a); and

(c) separating the product of step (b) to obtain compound **14k**.

27. (New) A method for synthesizing compound **14m**, the resveratrol derivative of claim 4 wherein  $R_{10}=R_{11}=-OCH_3$  and  $R_{12}=-O(PO)(OBn)_2$ ,

comprising the following steps:

- (a) protecting 4-hydroxybenzaldehyde to obtain a solution of 4-(*tert*)-butyldimethylsilyloxy-benzaldehyde;
- (b) adding *tert*-butyldimethylsilylchloride to the solution formed in step (a);
- (c) pouring the solution formed in step (b) into water, extracting with solvent, and removing solvent *in vacuo* to recover 4-(*tert*)-butyldimethylsilyloxy-benzaldehyde;
- (d) reacting the 4-(*tert*)-butyldimethylsilyloxy-benzaldehyde obtained in step (c) with phosphonium bromide and *n*-butyl lithium in tetrahydrofuran to form (Z)- and (E)-4'-(*tert*-butyldimethylsilyloxy)-3,5-dimethoxy-stilbene;
- (e) separating the (Z) and (E) isomers of the 4'-(*tert*-butyldimethylsilyloxy)-3,5-dimethoxy-stilbene to obtain (Z)-4'-(*tert*-butyldimethylsilyloxy)-3,5-dimethoxy-stilbene;
- (f) reacting the (Z)-4'-(*tert*-butyldimethylsilyloxy)-3,5-dimethoxy-stilbene obtained in step (e) with tetrabutylammonium fluoride and stirring, and separating the product of step (f) to obtain (Z)-3,5-dimethoxy-4'-hydroxy-stilbene;
- (g) forming, then cooling, a mixture of (Z)-3,5-dimethoxy-4'-hydroxy-stilbene obtained from step (f) and *N,N*-dimethylaminopyridine in anhydrous acetonitrile;
- (h) adding carbon tetrachloride and DIEA and to the cooled mixture of step (g), and stirring;

(i) pouring the product of step (h) into monobasic potassium phosphate, extracting with solvent and then removing solvent *in vacuo* to yield an organic phase; and

(j) subjecting the organic phase from step (i) to separation to obtain compound **14m**.

28. (New) A method for synthesizing compound **14n**, the resveratrol derivative of claim 4 wherein  $R_{10} = R_{11} = -OCH_3$  and  $R_{12} = -O(PO)(ONa)_2$ ,

comprising the following steps:

(a) protecting 4-hydroxybenzaldehyde to obtain a solution of 4-(*tert*)-butyldimethylsilyloxy-benzaldehyde;

(b) adding *tert*-butyldimethylsilylchloride to the solution formed in step (a);

(c) pouring the solution formed in step (b) into water, extracting with solvent, and removing solvent *in vacuo* to recover 4-(*tert*)-butyldimethylsilyloxy-benzaldehyde;

(d) reacting the 4-(*tert*)-butyldimethylsilyloxy-benzaldehyde obtained in step (c) with phosphonium bromide and *n*-butyl lithium in tetrahydrofuran to form (*Z*)- and (*E*)-4'-(*tert*-butyldimethylsilyloxy)-3,5-dimethoxy-stilbene;

(e) separating the (*Z*) and (*E*) isomers of the 4'-(*tert*-butyldimethylsilyloxy)-3,5-dimethoxy-stilbene to obtain (*Z*)-4'-(*tert*-butyldimethylsilyloxy)-3,5-dimethoxy-stilbene;

(f) reacting the (*Z*)-4'-(*tert*-butyldimethylsilyloxy)-3,5-dimethoxy-stilbene obtained in step (e) with tetrabutylammonium fluoride and stirring, and separating the product of step (f) to obtain (*Z*)-3,5-dimethoxy-4'-hydroxy-stilbene;



- (g) forming, then cooling, a mixture of (Z)-3,5-dimethoxy-4'-hydroxy-stilbene obtained from step (f) and *N,N*-dimethylaminopyridine in anhydrous acetonitrile;
- (h) adding carbon tetrachloride and DIEA and to the cooled mixture of step (g), and stirring;
- (i) pouring the product of step (h) into monobasic potassium phosphate, extracting with solvent and then removing solvent *in vacuo* to yield an organic phase;
- (j) subjecting the organic phase from step (i) to separation to obtain (Z)-3,5-dimethoxy-4-[*O*-bis(benzyl)phosphoryl]-stilbene;
- (k) adding bromotrimethylsilane to a solution of the (Z)-3,5-dimethoxy-4-[*O*-bis(benzyl)phosphoryl]-stilbene obtained in step (j) in anhydrous dichloromethane, and stirring;
- (l) adding water to the stirred solution obtained in step (k), washing with solvent to form an aqueous phase, then freeze drying the aqueous phase to form a solid;
- (m) forming a solution of the solid formed in step (l) and a solvent, adding sodium methoxide to the solution, stirring, removing the solvent; and
- (n) recovering a solid remaining after step (m) to obtain compound **14n**.